

1 **POT USING MAGNETIC FORCE TO LINK A LID AND A BODY**

2 **BACKGROUND OF THE INVENTION**

3 1. Field of the Invention

4 The present invention relates to, and more particularly to a pot, and more
5 particularly to a pot having a lid and a hollow body with one open end to be
6 closed by the lid. Both the lid and the body have magnets embedded in them such
7 that the lid is attracted by the body even when the lid is inclined relative to the
8 body.

9 2. Description of Related Art

10 A conventional pot normally has a hollow cylindrical body with one
11 open end and a lid detachably connected to the body to cover the open end. The
12 user is able to pour liquid into the hollow cylindrical body. When the liquid
13 inside the pot is to be poured out of the body, the user needs to hold the lid while
14 inclining the body to allow the liquid to flow out of the body. Otherwise, the lid
15 will fall from the body. That is, the user needs to be very careful when the pot is
16 used, which is quite troublesome.

17 In order to overcome the shortcoming, a different pot is introduced and
18 has the lid screwed to the body. When the pot is used, the user unscrews the lid a
19 little so that the liquid inside the body is able to flow out of the body. Thereafter,
20 the user screws the lid back to the body to completely seal the open end.
21 Continuously rotating the lid brings another drawback to the user, labor
22 inefficiency.

23 To overcome the shortcomings, the present invention tends to provide an
24 improved pot to mitigate the aforementioned problems.

1 SUMMARY OF THE INVENTION

2 The primary objective of the present invention is to provide an improved
3 pot using magnets to link the lid to the body such that when the pot is used, the
4 user only needs to rotate the lid 180 degrees relative to the body to have the lid
5 partially attracted by the body, and the outlet of the body is thus open and the
6 liquid inside the body is able to flow out of the body; whereas when the pot is not
7 being used to pour, the user rotates the lid again for another 180 degrees to have
8 the lid completely attracted by the body such that the outlet is closed and the
9 liquid is confined inside the body.

10 Another objective of the present invention is that there are first magnets
11 annularly embedded in a peripheral edge defining the open end of the body and
12 two second magnets diametrically embedded in the lid such that rotation of the
13 lid relative to the body results in a complete attraction between the lid and the
14 body in the first 180 degrees rotation and a partial attraction between the lid and
15 the body in the second 180 degrees rotation.

16 Other objects, advantages and novel features of the invention will
17 become more apparent from the following detailed description when taken in
18 conjunction with the accompanying drawings.

19 BRIEF DESCRIPTION OF THE DRAWINGS

20 Fig. 1 is an exploded perspective view of the pot of the present
21 invention;

22 Fig. 2 is a cross sectional view of the assembled pot of the present
23 invention;

24 Fig. 3 is a cross sectional view showing that the lid is partially attracted

1 by the body;

2 Fig. 4 is a cross sectional view showing that the lid is completely
3 attracted by the body;

4 Fig. 5 is a schematic cross sectional view showing that the lid is inclined
5 relative to the body and still kept in engagement with the body; and

6 Fig. 6 is a cross sectional view showing different arrangement of the first
7 magnet in the body.

8 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

9 With reference to Fig. 1, the pot in accordance with the present invention
10 includes a hollow cylindrical body (1) with an open end (11) and a lid (2) to
11 cover the open end (11).

12 The cylindrical body (1) has an outlet (111) defined in a peripheral edge
13 defining the open end (11) to communicate with the inside of the cylindrical
14 body (1). A slope (12) is formed around the peripheral edge of the open end (11).
15 A first flange (13) is formed at a joint between the slope (12) and an inner face of
16 the cylindrical body (1). Multiple first magnets (3) are embedded in the inner
17 face of the cylindrical body (1) and close to the first flange (13).

18 The lid (2) has a conical bottom (21) formed on a bottom face of the lid
19 (2) to correspond to the slope (12) of the cylindrical body (1) and a second flange
20 (22) corresponding to the first flange (13). Multiple second magnets (4) are
21 embedded in the bottom face of the lid (2) and close to the second flange (22).

22 With reference to Fig. 2, it is noted that when the lid (2) is mounted on
23 the cylindrical body (1), the conical bottom (21) mates with the slope (12).
24 Furthermore, the cylindrical body (1) may have an inner chamber (14) defined in

1 the side face of the cylindrical body (1) so as to enhance the temperature
2 retaining effect of the pot of the present invention.

3 With reference to Figs. 3, 4 and 5 and still taking Fig. 1 for reference, it is
4 noted that there are two second magnets (4) diametrically arranged in the lid (2).
5 There are three first magnets (3) in the cylindrical body (1), wherein two of
6 which are diametrically arranged in the inner side face of the cylindrical body (1)
7 and the third one is arranged in the inner side face of the cylindrical body (1) and
8 opposite relative to the outlet (111).

9 Therefore, when the pot of the present invention is in use and the
10 cylindrical body (1) is inclined relative to the ground, the user is able to rotate the
11 lid (2) relative to the cylindrical body (1) to have only one of the second magnets
12 (4) aligning with the one first magnet (3) which is oppositely located relative to
13 the outlet (111). Accordingly, the other second magnet (4) aligns with the outlet
14 (111). Because only one portion of the lid (2) is attracted by the cylindrical body
15 (1) due to the interactive attraction between the first magnet (3) and the second
16 magnet (4), the lid (2) is still able to be moved to allow the liquid to flow out of
17 the cylindrical body (1) and not fall from the cylindrical body (1) even when the
18 lid (2) is inclined relative to the cylindrical body (1). Under such a condition, the
19 user may pour the liquid out of the cylindrical body (1) and still maintain the lid
20 (2) attached to the cylindrical body (1). Still, when the lid (2) is inclined relative
21 to the cylindrical body (1), the engagement between the first flange (13) and the
22 second flange (22) further enhances the connection between the lid (2) and the
23 cylindrical body (1).

24 However, when the user wants to retain the liquid inside the cylindrical

1 body (1) when the lid (2) is inclined relative to the cylindrical body (1), the user
2 may rotate the lid (2) relative to the cylindrical body (1) to have both the second
3 magnets (4) aligned with the two diametrically arranged first magnets (3) such
4 that because the lid (2) is completely attracted by the cylindrical body (1),
5 movement of the lid (2) relative to the cylindrical body (1) is impossible.
6 Therefore, because of the alignment between the conical bottom (21) of the lid (2)
7 and the slope (12) of the cylindrical body (1), the liquid inside the cylindrical
8 body (1) is retained even when the lid (2) is inclined relative to the cylindrical
9 body (1).

10 With reference to Fig. 6, it is noted that there is only one first magnet (3)
11 annularly arranged on the peripheral edge of the open end (11) except the outlet
12 (111), which can still accomplish the requirements.

13 It is to be understood, however, that even though numerous
14 characteristics and advantages of the present invention have been set forth in the
15 foregoing description, together with details of the structure and function of the
16 invention, the disclosure is illustrative only, and changes may be made in detail,
17 especially in matters of shape, size, and arrangement of parts within the
18 principles of the invention to the full extent indicated by the broad general
19 meaning of the terms in which the appended claims are expressed.